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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/351,102	07/08/1999	RICHARD L. BONKOWSKI	13676.142	9254

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SALT LAKE CITY, UT 84111

EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 10/18/2002

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/351,102

Applicant(s)

BONKOWSKI ET AL.

Examiner

Alicia Chevalier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 and 42-57 is/are pending in the application.
- 4a) Of the above claim(s) 7,14-17,23-28 and 42-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-13,18-22 and 53-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18, 22.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

RESPONSE TO AMENDMENT

WITHDRAWN REJECTIONS

1. The 35 U.S.C. §102 rejection of claims 1-4, 53, 54, and 56 of record of record in paper #17, pages 2-3, paragraph #3 have been withdrawn due to Applicant's amendment in paper#21.
2. The 35 U.S.C. §102/103 rejection of claims 1, 4, 8, and 53-56 of record of record in paper #17, pages 3-4, paragraph #4 have been withdrawn due to Applicant's amendment in paper#21.
3. The 35 U.S.C. §103 rejection of claims 1-6, 8-13, 18-22, 53, 54, and 56 of record of record in paper #17, pages 4-7, paragraph #5 have been withdrawn due to Applicant's amendment in paper#21.

NEW REJECTIONS

4. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Rejections - 35 USC § 102

5. Claims 1-4, 53, 54, and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Lu (5,591,527).

Lu discloses an optical security article comprising a first transparent continuous layer with a structured surface, a transparent adhesive and a substrate (col. 6, lines 62-67). The first transparent continuous layer is an array of prisms with a groove depth and pitch to produce a

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diffraction grating (col. 6, lines 31-52). The first layer may be made of material such as polyethylene terephthalate, polycarbonate, and poly(vinylchloride) (col. 8, lines 9-15). The optical security article further comprises separation layer comprising an imaging material. The imaging is in the form of a "flip-flop" image which gives the article a second level of authenticity which provide viewable color changes across a narrow range of angles (col. 16, lines 12-36).

6. Claims 1-4, 8, 53, 55, and 56 are rejected under 35 U.S.C. 102(b) as being anticipated by Uyama et al. (5,700,550).

Uyama discloses a transparent hologram seal comprising a transparent base member, a release layer, a hologram forming layer, transparent color shifting evaporated layers, a color layer an anchor layer and an adhesive layer (figure 8).

The color layer and anchor layer are optional (col. 6, lines 46-47).

The hologram forming layer may be formed of a thermoplastic resin such as polycarbonate, polystyrene or polyvinyl chloride (col. 5, 46-58).

The optical path length in the transparent evaporated layer is changed if an angle at which it is viewed is changed when a visible light ray of specified wavelength range is transmitted or reflected, and the transmission light or reflected light is observed as a light of different color.

Therefore, even when the seal is superficially forged, it is easy to determine the real or imitation by observing a change in color caused by changing the viewing angle. In general. The spectral characteristic varies depending on the number of layers of the evaporated layer. See column 6, lines 25-34.

Claim Rejections - 35 USC § 103

7. Claims 1-6, 8-13, 18-22 and 53-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uyama et al. (5,700,550) in view of Coombs et al. (5,214,530).

Uyama discloses a transparent hologram seal comprising a transparent base member, a release layer, a hologram forming layer, transparent color shifting evaporated layers, a color layer an anchor layer and an adhesive layer (figure 8).

The color layer and anchor layer are optional (col. 6, lines 46-47).

The hologram forming layer may be formed of a thermoplastic resin such as polycarbonate, polystyrene or polyvinyl chloride (col. 5, 46-58).

The optical path length in the transparent evaporated layer is changed if an angle at which it is viewed is changed when a visible light ray of specified wavelength range is transmitted or reflected, and the transmission light or reflected light is observed as a light of different color. Therefore, even when the seal is superficially forged, it is easy to determine the real or imitation by observing a change in color caused by changing the viewing angle. In general, the spectral characteristic varies depending on the number of layers of the evaporated layer. See column 6, lines 25-34.

Uyama fails to disclose that the transparent color shifting evaporated layers comprise an absorber layer, a dielectric layer and a reflector layer.

Coombs discloses an optical variable interference device which has an observable color change at different viewing angles. The device can be utilized in optically variable interference devices or optical shifters for a thin film design. Coombs design has made it possible to achieve additional observable colors. See column 1, lines 10-24.

The device comprises an absorber layer, a dielectric layer, an absorber layer, a dielectric layer, a reflector, a dielectric layer, an absorber layer, a dielectric layer, and an absorber layer (figure 2). The reflector layer is made of material such as silver, aluminum, chromium, nickel, palladium, copper, or gold and have a thickness of approximately 400-1000 Angstroms (col. 2, line 59 through col. 3, line 9). The absorber layer maybe chromium with a thickness range of from 20 to 150 angstroms. The dielectric has a thickness of 400 to 1500 nanometers and made of materials such as magnesium fluoride or silicon oxide, where the index of refraction is less than or equal to 1.65. See column 3, lines 10-35.

Although Coombs does not explicitly teach the limitations the dielectric layer has an optical thickness in the range from about 2 QWOT at a design wavelength of about 400 nm to about 9 QWOT at a design wavelength of about 700nm, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. magnesium fluoride or silicon oxide, where the index of refraction is less than or equal to 1.65) used to produce the dielectric layer. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the optical variable interference device of Coombs as the transparent color shifting evaporated layers of Uyama. One of ordinary skill would be motivated to do so because Coombs would provide Uyama with additional observable colors making it hard to forge.

ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant's arguments filed in paper #21 regarding the 35 U.S.C. §102, §102/103, and §103 rejections of record have been considered but are moot since the rejections have been withdrawn.

Conclusion

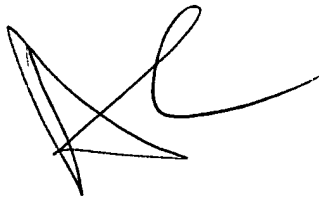
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (703) 305-1139. The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m. The Examiner can also be reached on alternate Fridays



If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Harold Pyon can be reached by dialing (703) 308-4251. The fax phone number for the organization official non-final papers is (703) 872-9310. The fax number for after final papers is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose phone number is (703) 308-0661.

ac

10/17/02




HAROLD PYON
SUPERVISORY PATENT EXAMINER


10/17/02